

CLAIMS

What is claimed is:

1. A KVM and peripheral device switch comprising:
 - a plurality of sets of KVM interfaces, each set of KVM interfaces having a keyboard interface, a mouse interface, and a video interface;
 - a plurality of sets of host interfaces, each set of host interfaces having a host keyboard and mouse interface and a host video interface;
 - at least one USB peripheral interface;
 - at least one host USB peripheral interface; and
 - a master controller configured to switch at least one of the sets of KVM interfaces and at least one of the USB peripheral interfaces among the host interfaces;
 - wherein a keyboard and mouse host is emulated to the keyboard interface and the mouse interface; and
 - wherein a keyboard and a mouse is emulated to the host interface.
2. The KVM and peripheral device switch of claim 1 further comprising:
 - at least one user controller communicably coupled to the master controller and at least one of the keyboard and mouse interfaces, the user controller being configured to emulate a keyboard and mouse host; and
 - at least one computer controller communicably coupled to the master controller and at least one of the sets of host keyboard and mouse interfaces, the computer controller being configured to emulate a keyboard and a mouse.
3. The KVM and peripheral device switch of claim 2 wherein the at least one user controller and the at least one computer controller are the same controller.
4. The KVM and peripheral device switch of claim 2 wherein the at least one user controller and the at least one computer controller are communicably coupled.
5. The KVM and peripheral device switch of claim 2 wherein the master controller is configured to select which of the at least one user controllers and which of the at least one computer controllers will communicate with each other.

6. The KVM and peripheral device switch of claim 5 wherein the master controller is configured to direct the selected user controller and the selected computer controller to communicate with each other.

7. The KVM and peripheral device switch of claim 5 wherein the master controller is configured to select user controllers based on received user identification information and computer controllers based on computer identification information.

8. The KVM and peripheral device switch of claim 1 further comprising a video switch communicably coupled to at least one of the video interfaces and at least one of the host video interfaces and configured to switch the video interfaces between the host video interfaces.

9. The KVM and peripheral device switch of claim 8 wherein the video switch is communicably coupled to the master controller.

10. The KVM and peripheral device switch of claim 1 further comprising a switch communicably coupled to the master controller for switching the USB peripheral interfaces between the host peripheral interfaces.

11. The KVM and peripheral device switch of claim 10 wherein the switch is a crosspoint matrix switch.

12. The KVM and peripheral device switch of claim 1 wherein the KVM and peripheral switch is compatible with both USB 1.x and USB 2.x.

13. The KVM and peripheral device switch of claim 1 wherein the KVM and peripheral device switch is capable of concurrently and independently switching keyboard and mouse interfaces between keyboard and mouse host interfaces and peripheral interfaces between host peripheral interfaces.

14. The KVM and peripheral device switch of claim 1 wherein the keyboard interface and mouse interface are each selected from the group consisting of: SUN, PS/2, MAC, USB, Universal, and combinations thereof.

15. The KVM and peripheral device switch of claim 1 further comprising a user interface selected from the group consisting of: buttons, RS232 commands, Ethernet, remote toggle switch, on-screen display, and combinations thereof.

16. A KVM and peripheral device switch comprising:

- a plurality of sets of KVM interfaces, each set of KVM interfaces having a keyboard interface, a mouse interface, and a video interface;

- at least one user controller communicably coupled to at least one of the sets of KVM interfaces, the user controller being configured to emulate a keyboard and mouse host; and

- a plurality of sets of host interfaces, each set of host interfaces having a host keyboard and mouse interface and a host video interface;

- at least one computer controller communicably coupled to at least one of the sets of host interfaces, the computer controller being configured to emulate a keyboard and a mouse;

- at least one USB peripheral interface;

- at least one host USB peripheral interface; and

- a peripheral switch communicably coupled to at least one of the peripheral interfaces and to at least one of the host peripheral interfaces and configured to switch the USB peripheral interfaces between the host peripheral interfaces; and

- a video switch communicably coupled to at least one video interface and to at least one host video interface and configured to switch the video interfaces between the host video interfaces; and

- a master controller communicably coupled to the user controller, the computer controller, the peripheral switch, and the video switch and configured to switch at least one of the sets of keyboard, mouse and video interfaces and at least one of the USB peripheral interfaces between the host peripheral interfaces.

17. The KVM and peripheral device switch of claim 16 wherein the master controller is configured to direct the selected user controller and the selected computer controller to communicate with each other.

18. The KVM and peripheral device switch of claim 16 wherein the KVM and peripheral switch is compatible with both USB 1.x and USB 2.x.

19. The KVM and peripheral device switch of claim 16 wherein the KVM and peripheral switch is capable of concurrently and independently switching keyboard and mouse interfaces between keyboard and mouse host interfaces and peripheral interfaces between host peripheral interfaces.

20. The KVM and peripheral device switch of claim 16 wherein the keyboard interface and mouse interface are each selected from the group consisting of: SUN, PS/2, MAC, USB, Universal, and combinations thereof.

21. A method for switching at least one keyboard interface, at least one mouse interface, at least one video interface, and at least one USB peripheral interface between host interfaces comprising:

emulating a keyboard and a mouse to each host interface;

emulating a host to each keyboard interface and mouse interface;

receiving a switching command at a controller, the switching command containing identification information; and

using the identification information to connect at least one of the keyboard interfaces, at least one of the mouse interfaces, at least one of the video interfaces, and at least one of the peripheral interfaces to at least one of the host interfaces.

22. The method of claim 21, further comprising:

(a) determining whether the peripheral interface is to be switched concurrently with the keyboard interface and the mouse interface;

(b) concurrently switching the peripheral interface with the keyboard interface and mouse interface upon a positive determination in step (a).